

GALAX 2020

TRANSPORTATION PLAN

**Developed by the
Transportation Planning Division**

Of the

Virginia Department of Transportation

In Cooperation With

The U.S. Department Of Transportation, Federal Highway Administration

&

The City of Galax

September 2001

This report does not constitute a standard specification, regulation or provide a funding mechanism
for the included transportation recommendations

INTRODUCTION

The Galax 2020 Transportation Plan was developed as a joint effort between the Virginia Department of Transportation (VDOT) and the City of Galax. The purpose of this study was to evaluate the existing transportation system and future demand in the City of Galax and to recommend a set of transportation improvements that can best meet existing and future transportation infrastructure needs.

Improved transportation systems are vital to Virginia's and to the local area's economic growth and development. Providing effective, safe, and efficient movement of people and goods is a basic goal of VDOT's transportation program. This guiding principle, together with consideration of environmental issues and local mobility needs, was the basis for the development of this transportation plan.

VDOT will use this plan when evaluating requests from the local governments for specific transportation projects and/or implementing projects that VDOT initiates. This list of recommendations will also be used in the statewide transportation planning process so that the magnitude of transportation needs statewide can be more accurately quantified.

STUDY AREA AND THOROUGHFARE SYSTEM

The City of Galax is located in the mountainous section of southwest Virginia, near the border of North Carolina, less than 100 miles southwest of Roanoke, Virginia and roughly 70 miles northwest of Winston-Salem, North Carolina. The City limits are bounded by both Carroll and Grayson Counties and encompass approximately 7.5 square miles. The downtown lies approximately nine miles west of Interstate 77 (I-77) and lies at the intersection of US Route 58/221 (US 58/221) and State Primary Route 89 (VA 89).

The study area for the 2020 Transportation Plan coincided with the boundary line of the corporate limits. Within this boundary line (commonly called a cordon line), a set of specific roadways was selected and designated as the urban thoroughfares. The analysis and recommendations were limited to these urban thoroughfares and any new facilities recommended in this study.

Thoroughfares are defined as facilities that operate as arterials or collector routes. The distinction between functional classifications (arterial, collector, local street) is based on whether the facility primarily serves "through-traffic" or provides direct access to adjacent land. Thoroughfare roadways in cities and towns with populations over 5,000 have an "urban" designation and those in cities and towns with populations less than 5,000 are designated "rural".

Roadways not classified by this system, but deemed important by local governments, may be in the 2020 Transportation Plan as "non-thoroughfare" roadways. Typically, these are planned roadways or improvements that will be built with funds (public or private) other than VDOT funds.

DEMOGRAPHIC OVERVIEW

The 1996 Galax Comprehensive Plan indicates that, although the demographics of Galax have remained generally stable, the composition of the Galax population is gradually changing. Most significantly, during the past ten to twenty years, the City's population on average has become older, more educated, and earns a higher income. Based on the 2000 Census, the Galax population was 6,837. The City continues to be a "net importer" of jobs and workers and is recognized as a regional employment center, with a total of 8,508 jobs in the City compared to an employed resident work force of only 3,236.

Future population forecasts are provided by the Galax Comprehensive Plan in a range of growth scenarios. These include low, intermediate, and high growth scenarios all extending from the 1990 population of 6,670 residents. The "low trend" forecast assumes the overall annual growth rate is approximately one percent. Given this rate of growth, the population of Galax would increase to 6,920 persons by the year 2015 and would reach 6,970 persons by the year 2020. The "intermediate trend" forecast assumes a two percent annual growth rate. Given this growth rate, the population of Galax would increase to 7,073 persons by the year 2015 and would reach 7,154 persons by the year 2020. The "high trend" forecast assumes a higher growth rate during the next two decades than that experienced in recent decades, reflecting the continued expansion of the employment base and the potential enhancements of key public facilities, housing stock, and overall quality of life in the City. The annual growth rate using this scenario is approximately four

percent. In this case the population of Galax would increase to 7,329 persons by the year 2015 and would reach 7,461 persons by the year 2020.

SUMMARY OF APPROACH AND ANALYSIS METHODS

The development of the transportation plan followed a process that included data collection, review, and analysis. The data collected included information such as traffic counts, police accident reports, roadway geometric inventory data, bridge structural inspection reports, at-grade railroad crossing geometric data, tourism surveys, and goods movement surveys. Review and analysis of this data was combined with a review and analysis of previous transportation and land-use plans and other studies. Furthermore, meetings were held with local staff throughout the study process to gather additional input.

TRANSPORTATION RECOMMENDATIONS

Transportation recommendations are included in the plan as phased recommendations or other recommendations.

Phased recommendations are generally improvements to the VDOT-maintained roadway system and have been phased to establish a basis for prioritization. Phased recommendations are divided into three phases. Phase One recommendations are base year improvements intended to address the most immediate needs of the City. Phase Two recommendations are interim study year (2010) improvements. Typically, these improvements are not needed in the immediate future. However, planning and budgeting for their future implementation may allow them to be in place for the interim study year of 2010. Phase Three recommendations are long-term (2020) improvements that do not have an immediate or short-term need. However, in the long-term, as traffic grows and existing facilities age, their importance will become more apparent. Long-term recommended improvements may also be re-evaluated as this plan is updated to determine if the need for their implementation has been met, or whether they should be deferred into the future again when their need may develop. In some instances, long-term recommended improvements may be removed from the transportation planning effort if their need does not develop or if other circumstances cause a change of priorities in the study area.

Other recommendations focus on parking, bicycle/pedestrian facilities, intercity rail, intercity bus, air travel, transit, paratransit, taxi, and goods movement and may include areas of special concern. These items are not typically funded as part of the urban transportation plan, but may include components addressed by any of the phased recommendations.

PHASED RECOMMENDATIONS

PHASE ONE: BASE YEAR (2001) RECOMMENDATIONS

Roadway Improvements

- Widen VA 89 (Main Street) between Meadow Street and the Galax southern corporate limits from a 2-lane rural roadway to a 4-lane urban divided highway. This project includes turn bays and signalization at the VA 97 (Pipers Gap Road) intersection. The total length of this project is 1.43 miles and the total cost has been estimated at \$11,369,000.
- Widen Meadow Street to a 4-lane urban roadway from Poplar Knob Road to US 58/221 (E Stuart Drive), including turn bay and access improvements at the US 58/221 (E Stuart Drive) intersection. The total length of this project is 0.51 miles and the total cost has been estimated at \$3,696,000.

Intersection Improvements

- Install a new traffic signal at the intersection of VA 89 (Main Street) and VA 97 (Pipers Gap Road). The total cost for this improvement has been estimated at \$180,000.
- There is a high frequency of rear-end accidents at the intersection of US 58/221 (E Stuart Drive) and VA 89 (Main Street) and at the intersection of US 58/221 (E Stuart Drive) and Meadow Street. Implementation of a coordinated signal system (hardwire) between these signals is recommended to improve vehicle platooning between these intersections. The total cost of this improvement has been estimated at \$120,000.

- The intersection of US 58/221 (E Stuart Drive) and Fries Road has steep side street grades and poor intersection visibility along the horizontal curve. Recommended improvements include installation of a flashing beacon and ensuring the intersection is well lighted at night. The total cost of this improvement has been estimated at \$90,000.
- At the intersection of Poplar Knob Road and Country Club Lane, the intersection is not clearly delineated from the adjacent parking areas, and the stop signs are placed with construction barrels. The intersection is recommended to be improved by re-striping and access control (curb or sidewalk) from adjacent properties. The total cost of this improvement has been estimated at \$50,000.

PHASE TWO: INTERIM YEAR (2010) RECOMMENDATIONS

Roadway Improvements

- Widen Glendale Road to a 4-lane urban roadway from Cliffview Road to Cranberry Road. The total length of this project is 1.50 miles and the total cost has been estimated at \$10,800,000.
- Widen Cranberry Road to a 4-lane urban roadway from Glendale Road to US 58/221 (E Stuart Drive). The total length of this project is 0.20 miles and the total cost has been estimated at \$1,620,000.
- Widen Meadow Street to a 4-lane urban roadway from VA 89 (Main Street) to Poplar Knob Road. When this project is complete, re-designate Meadow Street to an urban principal arterial (VA 89) and demote Main Street (north of Meadow Street) to an urban minor arterial. The re-designation of Meadow Street addresses City staff concerns about the need for a bypass to accommodate traffic flows between the south and east sides of the downtown. The widening and re-designation will enhance and protect the through function of Meadow Street as a bypass and will allow Main Street to continue as a viable, walkable, and vibrant downtown destination route. Bicycle facilities should also be incorporated into the widening and intersection improvements for both Meadow Street and Main Street. The total length of this project is 1.24 miles and the total cost has been estimated at \$8,950,000.

Intersection Improvements

- On US 58/221 (E Stuart Drive), implementation of a coordinated signal system between Meadow Street and the eastern corporate limits of Galax (6 signals) is recommended to improve vehicle platooning, provide more gaps for side-street access, provide some interim capacity relief, and reduce rear-end accident frequency. The total cost of this improvement has been estimated at \$480,000.

PHASE THREE: STUDY YEAR (2020) RECOMMENDATIONS

Roadway Improvements

- Widen US 58/221 (E Stuart Drive) to an urban 6-lane divided highway from Meadow Street to Cranberry Road. The project should include bicycle facilities along the entire route. The total length of this project is 2.40 miles and the total cost has been estimated at \$27,600,000.

Intersection Improvements

- There were no long-term intersection improvements identified for the City of Galax.

OTHER RECOMMENDATIONS

Parking

Currently, VA 89 (Main Street) in the vicinity of the downtown area is the only thoroughfare street that allows on-street parking.

In order to provide safer on-street parking and a pedestrian-friendly environment on the commercial sections of downtown Main Street, Meadow Street should be classified as an urban principal arterial from VA 89 (Main Street) to US 58/221 (E Stuart Drive). This will recognize that Main Street is a commercial destination and that Meadow Street is primarily for through and industrial/manufacturing traffic.

The following additional on-street parking recommendations are provided:

- The intersection of Poplar Knob Road and County Club Lane should be improved such that the parking areas for apartments adjacent to the intersection are separated from the travel lanes.
- Tour bus parking and loading areas – Dimensions for long-term parking and for loading and unloading areas should be provided to Galax City staff prior to development of future tour bus facilities.

Bicycle/Pedestrian

Currently Galax has no dedicated bicycle facilities within the corporate limits other than the New River Trail. Although bicycles may be ridden on all streets and highways within Galax, there are no routes or paths designed specifically for bicycles.

At the request of City staff, bicycle routes are included in the Galax 2020 Transportation Plan. This transportation plan seeks to address the need for basic bicycle transportation facilities between the major tourist, shopping, and employment areas within and adjacent to the City of Galax. The following thoroughfares have been identified as the primary bicycle routes for the City of Galax: US 58/221 (E Stuart Drive / Reserve Boulevard), VA 89 (Main Street), and Meadow Street.

Sidewalks, footpaths, and multi-use recreational paths are already planned for the City of Galax. The currently planned “Galax Trail” connects Felts Park with the New River Trail, the Library/Museum, and the Farmer’s Market. Planned pedestrian routes adjacent to or on VDOT maintained thoroughfares will be incorporated into the design of improvements to those thoroughfares.

Intercity Rail

The nearest intercity rail stops are all approximately 100 miles from Galax in West Virginia, Virginia, or North Carolina. No formal plans for initiation of rail passenger service have been announced in the region. However, feasibility studies conducted by the Virginia Department of Rail and Public Transportation in 1994 and 1997 have investigated initiation of rail passenger service between Bristol, Richmond, and Washington D.C., but did not include Galax as a proposed station. A station was proposed nearby in Wytheville, Virginia (38 miles south).

Intercity Bus

The City is currently not served by intercity bus. Greyhound service is located just outside Galax in Fort Chiswell, Virginia (30 miles north) and provides regularly scheduled access to transfers nationwide. No enhancements are recommended at this time.

Air Travel

Commercial Service

Commercial air passenger service is available at Roanoke Regional Airport (94 miles northeast of Galax) in Roanoke, Virginia; Smith Reynolds Airport (68 miles southeast) in Winston-Salem, North Carolina; and Piedmont Triad Airport (88 miles southeast) in Greensboro, North Carolina. Airfreight and charter services are available at each of these airports.

General Aviation

Twin-County Airport, which is located seven miles northeast of Galax in Carroll County, serves the City of Galax, as well as Carroll County. The airport is owned and operated by the Twin County Airport Commission. The facility handles about 7,500 operations (take-offs and landings) per year. About 60 percent of this traffic is recreational flying; the remaining 40 percent is classified as corporate travel. No charter service operates out of the airport.

No additional enhancements to air services are proposed at this time.

Transit, Paratransit, and Taxi

The City of Galax operates an on-call van service called the Galax Transit which is available to all residents of the City. The City estimates that the Galax Transit carries roughly 500 passengers a month. There is a single cab service operating in the City that is 90 percent phone call service. There is also assistance available for the elderly and the disabled to access health care and other destinations.

It is recommended that the existing Galax Transit operators evaluate the potential to upgrade the existing on-call van service to a deviated fixed route service.

Goods Movement

Given the manufacturing and commercial employment in Galax there are several thoroughfares that also function as truck routes. These include: US 58/221 (E Stuart Drive), VA 89 (Main Street), Glendale Road, and Meadow Street. Truck traffic is expected to increase along these routes as employment increases in Galax along with the neighboring towns of Independence, White Top, and Hillsville over the next 20 years.

One area of concern to the City staff is truck traffic on McArthur Street from W. Stuart Drive to VA 89 (Main Street). The truck traffic on McArthur Street is “cutting through” residential neighborhoods and school sites. A local initiative solution to the problem is to implement traffic calming devices to slow truck traffic through the residential areas and/or divert trips to the thoroughfare roadways.

Local officials did not identify any other deficiencies that would hinder future truck operations in the City.

Tourism

The City of Galax is a tourist destination due to the location of the southern terminus of the New River Trail State Park (a major destination for bicycle recreation), Matthews Museum (significant local attraction), and Felts Park (also the site for the annual Old Fiddler’s Convention held in the second weekend in August). In addition to these attractions, the Blue Ridge Parkway is only seven miles south of the City by VA 89 (Main Street).

One transportation-related tourism concern is the accommodation of large tour buses. There is currently a need for better loading/unloading areas and for long-term parking areas. As mentioned in the parking section, dimensions for long-term parking and for loading and unloading areas should be determined by Galax City staff to aid in the development of future tour bus facilities.

LOCAL PROJECTS¹

Local, or non-thoroughfare, projects are planned roadways recommended for construction based upon previously adopted land use and transportation plans and City staff recommendations.

The City of Galax has expressed interest in providing an additional access to Twin-County Hospital located north of US 58/221 (E Stuart Drive) off Glendale Road. This would alleviate concerns over the availability of emergency medical services should the current single access point be closed due to severe snow, ice, or other unforeseen reasons.

ENVIRONMENTAL OVERVIEW

An environmental overview was conducted for the Galax thoroughfare roadway recommendations that included widening (providing additional travel lanes) or development of new roadway facilities. To conduct the environmental overview, secondary data from VDOT and other readily available sources was used. Information on the environmental overview methodology can be found in the Galax 2020 Transportation Plan Technical Report. The following is a brief summary of potential environmental impacts:

- Meadow Street widening: 11 businesses and 10 homes

¹ Local recommendations are included for information purposes only and are not necessarily supported by VDOT.

- US 58/221 (E Stuart Drive) widening: 43 businesses and 1 home
- Glendale Road widening: 5 businesses and 33 homes

These estimates are intended to represent the worst-case scenario of impacts. Further evaluation of environmental impacts resulting from each of these recommendations should occur once they are developed in more detail. Local projects included in this plan are for information purposes only and are not necessarily supported by VDOT. Therefore, they were not reviewed as part of the environmental overview. There were no additional environmental features identified in Galax that would preclude implementation of any of the recommendations.

LOCAL COORDINATION AND CITIZEN PARTICIPATION

The development of the Galax 2020 Transportation Plan included several coordination meetings with City staff and a public meeting held with VDOT representatives, City officials, and residents from Galax.

The coordination meetings consisted of a kick-off meeting, an existing conditions meeting, and a draft recommendations meeting. The kick-off meeting, held in April 1999, enabled the project team to discuss with local staff the purpose and scope of the study, the schedule for data collection and plan preparation, and the coordination process. The second meeting (existing conditions), held in May 2000, allowed the project team to present the results of baseline and horizon year traffic analysis and also allowed local staff to communicate desired transportation needs. Finally, at the draft recommendations meeting, held in June 2000, the project team presented and discussed with City officials the draft 2020 transportation recommendations. City staff provided input that was then used to draft the final recommendations.

After the series of coordination meetings, a public meeting was held at the Galax Municipal Building on June 7, 2001. The purpose of this meeting was to present the recommendations to City officials, citizens, and other interested parties, to receive comments on the plan, and to allow the City Council to consider adopting the plan.

PLAN ADOPTION

The Small Urban Area Transportation Plan for the City of Galax was adopted by the Galax City Council on September 10, 2001.

ADDITIONAL INFORMATION

More details on the development of the Galax 2020 Transportation Plan and the study recommendations are available in the Galax 2020 Transportation Plan Technical Report and at the Galax 2020 Transportation Plan website, <http://www.vdoturbanplans.com/Galax.htm>. Copies of the Technical Report are located at the Galax City Hall and Public Library. They are also available from the VDOT Transportation Planning Division at the central office in Richmond, Virginia, at the Salem District office in Salem, Virginia, and at the Residency office in Hillsville, Virginia.

Projects included in the Virginia Transportation Development Plan (VTDP) are not part of this recommendations package. The VTDP can be reviewed online at VDOT's website, <http://www.virginiadot.org>.

Information on VTDP projects for the City of Galax can also be found by contacting the VDOT Resident Engineer at the Hillsville Residency office in Hillsville, Virginia (276-728-2512).

GALAX TRANSPORTATION RECOMMENDATIONS²

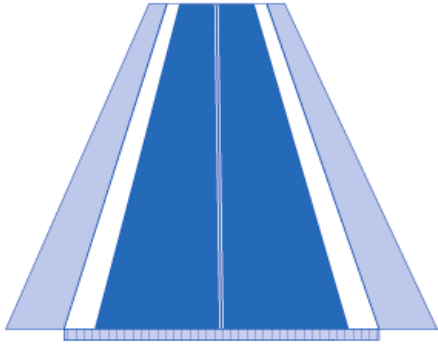
Route #	Route Name	From	To	Road Segment Length (Miles)	Recommendation	Cost (Yr 2000 \$)	Existing Typical Section (Width)	Recom. Typical Section (Width)	Average Daily Traffic (ADT)		
									Year 2000	Year 2010	Year 2020
VA 89	Main St	SCL Galax	Meadow St	1.43	Year 2001 Widen to 4-lane divided urban roadway including bike lanes	11,369,000	R2 (22')	U4D (48')	14,690	16,600	18,800
	Meadow St	Poplar Knob Rd	US 58/221 (E Stuart Dr)	0.51	Year 2001 Widen to 4-lane urban roadway including bike lanes	3,696,000	U2 (34')	U4 (48')	14,090	17,600	21,900
	Glendale Rd	Cliffview Rd	Cranberry Rd	1.50	Year 2010 Widen to 4-lane urban roadway	10,800,000	R2 (22')	U4 (48')	4,420	5,300	6,400
	Cranberry Rd	Glendale Rd	US 58/221 (E Stuart Dr)	0.20	Year 2010 Widen to 4-lane urban roadway	1,620,000	U2 (20')	U4 (48')	2,900	3,200	3,500
	Meadow St	VA 89 (Main St)	Poplar Knob Rd	1.24	Year 2010 Widen to 4-lane urban roadway including bike lanes, pedestrian crosswalks and signage	8,950,000	R2 (22')	U4 (48')	7,570	8,600	9,900
US 58/221	E Stuart Dr	Meadow St	Cranberry Rd	2.40	Year 2020 Widen to 6-lane divided roadway including bike lanes	27,600,000	U4D (54')	U6D (72')	31,100	37,200	44,500
	Intersection Improvement	VA 89 (Main St)	VA 97 (Pipers Gap Road)	N/A	Year 2001 Install new traffic signal	180,000	N/A	N/A	N/A	N/A	N/A
	Intersection Improvement	US 58/221 (E Stuart Dr)	VA 89 (Main St) to Meadow St	N/A	Year 2001 Implement coordinated signal system (2 signals) on US 58/221	120,000	N/A	N/A	N/A	N/A	N/A
	Intersection Improvement	US 58/221 (E Stuart Dr)	Fries Rd	N/A	Year 2001 Install flashing beacon and improve lighting	90,000	N/A	N/A	N/A	N/A	N/A
	Intersection Improvement	Poplar Knob Rd	Country Club Ln	N/A	Year 2001 Improve intersection w/stripping & access control to adjacent properties	50,000	N/A	N/A	N/A	N/A	N/A
	Intersection Improvement	US 58/221 (E Stuart Dr)	Meadow St to ECL Galax	N/A	Year 2010 Implement coordinated signal system (6 signals) on US 58/221	480,000	N/A	N/A	N/A	N/A	N/A
Total						64,955,000					

² Only thoroughfare roadways with recommendations are shown. For a complete listing of thoroughfare roadways, please refer to the Galax 2020 Transportation Plan Technical Report or the Galax 2020 Transportation Plan website, <http://www.vdoturbanplans.com/Galax.htm>.

TYPICAL SECTIONS

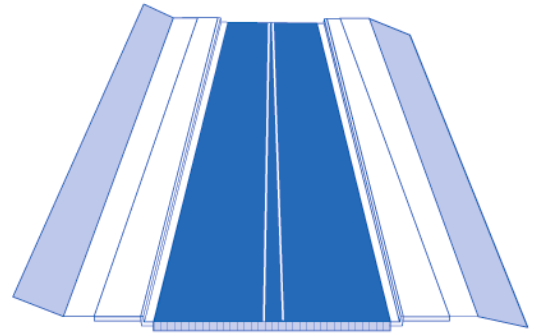
R2

Rural 2-lane roadway with standard shoulders and ditches



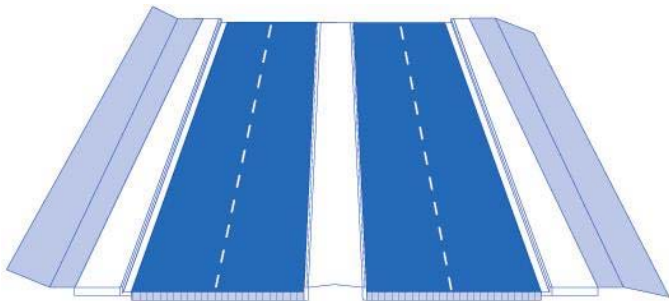
U2

Urban 2-lane roadway with curb and gutter



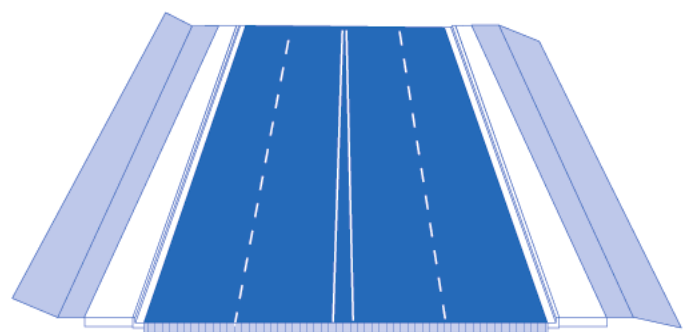
U4D

Urban 4-lane divided roadway with curb and gutter



U4

Urban 4-lane roadway with curb and gutter



U6D

Urban 6-lane divided roadway with curb and gutter

